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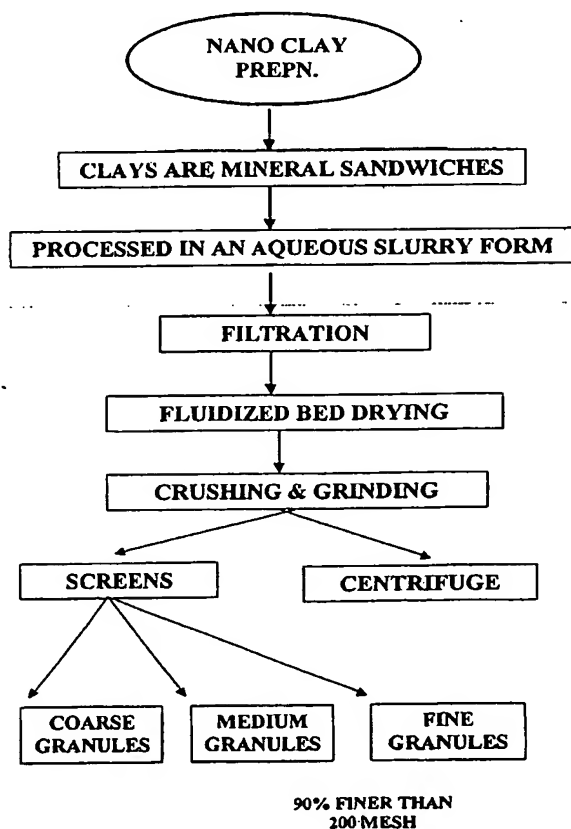
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[Continued on next page]

(54) Title: **EXFOLIATED NANOCCLAYS**



(57) Abstract: The present invention discloses exfoliated nanoclays and a process for preparation thereof from ordinary layered smectic clays [such as bentonite mineral clay from Gujarat]. The procedure by which exfoliation occurs in clay is by insertion of intercalants (chemicals/swelling agents/solvents/monomers/polymers). These intercalants may form a compound with clay and disturb regularity in the arrangement of layers. By these processes it is possible to obtain partially or fully exfoliated nanoclays. Polypropylene nanocomposite were made using exfoliated bentonite nanoclay and also using Cloisite 20A. Tensile strength at break of new nanocomposite was 3.5 times that of commercial one.



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